

WHAT IS CLAIMED IS:

1. A microscope apparatus comprising:

an area-light source that outputs a uniform area light, wherein the area light passes through a sample;

5 a plurality of eye pieces to simultaneously observe the sample, each eye piece having a field of view and the fields of view of all the eye pieces are aligned in a direction perpendicular to an optical axis of the area light;

an adjusting unit that includes a notch that extends in the  
10 direction perpendicular to the optical axis of the area light, and a width of the notch changes in a predetermined manner, wherein an amount of the area light passing through the sample is adjusted by moving the adjusting unit in the direction perpendicular to the optical axis of the area light.

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2. The microscope apparatus according to claim 1, wherein the adjusting unit is moved in the direction perpendicular to the optical axis of the area light so as to adjust the amount of the area light passing through each of the fields of view while adjusting total amount of light  
20 that is incident on the fields of view.

3. The microscope apparatus according to claim 1, wherein the width of the notch changes monotonously.

25 4. The microscope apparatus according to claim 1, wherein the

width of the notch changes continuously.

5. The microscope apparatus according to claim 1, wherein the sample includes a fluorescent objects and a non-fluorescent object and  
5 both the fluorescent object and the non-fluorescent object are visible.

6. The microscope apparatus according to claim 1, wherein the sample includes a plurality of non-fluorescent objects and the non-fluorescent objects are visible.

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7. The microscope apparatus according to claim 1, wherein the sample includes a plurality of non-fluorescent objects mixed in a culture medium and the non-fluorescent objects are visible.

15 8. The microscope apparatus according to claim 1, comprising two eye pieces, and a ratio of areas of fields of view of the eye pieces is between 1.03:1 and 1.3:1.

9. The microscope apparatus according to claim 1, wherein the  
20 notch is V-shaped.

10. The microscope apparatus according to claim 9, wherein an angle between sides of the notch is between 10° and 45°.

25 11. The microscope apparatus according to claim 1, wherein the

sample is positioned at a position that is 20 millimeters to 60 millimeters away from the adjusting unit.

12. The microscope apparatus according to claim 1, wherein angle  
5 of inclination between the sample and an optical axis towards the eye  
pieces corresponding to each field of view from the sample is between  
10° and 15°.

13. The microscope apparatus according to claim 1, wherein  
10 the notch is formed with two light shading objects capable of  
pivoting around a point joint.

14. The microscope apparatus according to claim 1, wherein the  
notch is tilted with respect to the area-light source and continuously  
15 change the angle between sides of the notch.

15. The microscope apparatus according to claim 1, wherein  
the notch is formed in a light shading object.

20 16. The microscope apparatus according to claim 1, wherein  
notchs are formed in each of two light shading objects capable  
of pivoting around a line joint.